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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,862	09/06/2000	OSAMU YUKI	35.C14771	9665
5514	7590	10/06/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			TILLERY, RASHAWN N	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/655,862

Applicant(s)

YUKI ET AL.

Examiner

Rashawn N Tillery

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/18/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 12-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinugasa et al (US5043817) in view of Yokouchi et al (US6628328).

Regarding claims 1 and 11, Kinugasa discloses, in figures 5 and 6, an image pickup apparatus comprising:

an image pickup area having a plurality of pixels (16);

a reads circuit (11; Kinugasa reads out all pixel signals of the array using interlace scanning combining odd and even rows; see col. 6, lines 11-38) having a first read-out mode for reading signals of pixels contained in a first image pickup area in the image pickup area, through addition of n pixels (Examiner notes that Applicant describes a first read means as an addition mode where the pixels located in a central area are read out; see page 14, line 9-14; also see page 18, line 23, to page 19, line 13); and

having a second read-out mode (12; Kinugasa reads out signals in a zoom area one row at a time; see col. 6, line 39 to col. 7, line 27) for reading signals of pixels contained in a second image pickup area smaller than the first image pickup area,

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through addition of  $m$  pixels or without addition (Examiner notes that Applicant describes a second read means as a non-addition mode where the pixels located in a zoom area are read out; see page 14, line 23 to page 15, line 5; also see page 19, line 14, to page 20, line 9).

Kinugasa does not expressly disclose an exposure control circuit which effects exposures control corresponding to each of the first and second read-out modes. Yokouchi discloses, in figure 1, an image pickup device operable in two modes- an all-pixel read mode and a thinning read mode. Yokouchi additionally reveals an auto exposure circuit for exposure control. The examiner notes that Yokouchi's read modes both effect reading from the whole of a pixel area; however, because the number of pixels that are read out correspond to the selected read-out mode, Yokouchi could be interpreted to read on Applicant's claim language. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kinugasa's teachings since Yokouchi teaches exposure control is performed on all pixels that are read out for a given mode.

Regarding claim 2, Kinugasa discloses, in figure 6, the image pickup area includes a common output unit (17) to which signals of a plurality of pixels are read and output sequentially, and wherein the read circuit reads signals through addition of  $n$  pixels to the common output unit in the first read-out mode, and reads signals through addition of  $m$  pixels or without addition to the common output unit in the second read-out mode (Kinugasa reads out all pixels signals of the array using interlace scanning

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combining odd and even rows; see col. 6, lines 11-38; and reads out signals in a zoom area one row at a time; see col. 6, line 39 to col. 7, line 27).

Regarding claim 3, Kinugasa discloses, in figure 6, the read circuit performs addition of  $n$  pixels in the common output unit in the first read-out mode (see col. 6, lines 11-28).

Regarding claim 4, Kinugasa discloses an image pickup device operable in a normal operation mode where adjacent pixel rows are added and output via a VCCD to a HCCD and a zooming-in mode where pixel rows are singly output. Kinugasa does not expressly disclose digitizing the output of either of the two modes. Yokouchi discloses, in figure 1, an image pickup device operable in two modes- an all-pixel read mode and a thinning read mode. Yokouchi reveals that it is well known in the art to digitize the output of signals in either mode. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kinugasa's teachings by including an ADC for purposes of post processing or display.

Regarding claim 5, Kinugasa discloses an image pickup device operable in a normal operation mode where adjacent pixel rows are added and output via a VCCD to a HCCD and a zooming-in mode where pixel rows are singly output. Kinugasa does not expressly disclose a processing circuit. Yokouchi discloses, in figure 1, an image pickup device operable in two modes- an all-pixel read mode and a thinning read mode. Yokouchi reveals that it is well known in the art to process signals of different modes using a same processing unit. It would have been obvious to one of ordinary skill in the

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art at the time the invention was made to modify Kinugasa's teachings by including a processing means for purposes of display.

Regarding claim 6, Kinugasa discloses the number of signals read by the read circuit in the first read-out mode is approximately equal to the number of signals read by the read circuit in the second read-out mode since all the pixels of the array are read out in both modes- normal operating and zooming-in.

Regarding claim 7, Kinugasa discloses an image pickup device operable in a normal operation mode where adjacent pixel rows are added and output via a VCCD to a HCCD and a zooming-in mode where pixel rows are singly output. Kinugasa does not expressly disclose control means for storing an exposure evaluation value and a focus evaluation value. Yokouchi discloses, in figure 1, an image pickup device operable in two modes- an all-pixel read mode and a thinning read mode. Yokouchi additionally reveals auto focus and auto exposure circuits for focus control and exposure control. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kinugasa's teachings by including auto focus and auto exposure circuits and use the focus evaluation value and the exposure evaluation value for control in accordance with a designated mode since the processing conditions for the two modes vary. One would have been motivated to do so in an effort to enhance image quality.

Regarding claim 8, Kinugasa discloses, in figure 4, a lens (1) for focusing light upon the image area. Kinugasa does not expressly disclose a processing means for forming luminance signals and color signals. Yokouchi discloses, in figure 1, an image pickup device operable in two modes- an all-pixel read mode and a thinning read mode.

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Yokouchi reveals that it is well known in the art to process signals of different modes using a same processing unit. Yokouchi does not expressly disclose a processing means for forming color signals. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kinugasa's teachings by including a processing means for forming luminance and color signals since it is well known in the camera art to produce color images for display.

Regarding claim 9, Kinugasa discloses, in figures 5 and 6, an image pickup apparatus comprising:

- an image pickup area including pixels arranged in horizontal and vertical direction, vertical output lines (17) to which signals of pixels are read out and a horizontal output line (18) to which signals from the vertical output lines are read out;

- a driver circuit for controlling transistors in the image pickup area to effect a first read-out mode for reading signals of pixels contained in a first image pickup area in the image pickup area through addition of  $n$  pixels to the horizontal output line (11; Kinugasa reads out all pixel signals of the array using interlace scanning combining odd and even rows; see col. 6, lines 11-38) and a second read-out mode for reading signals of pixels contained in a second image pickup area smaller than the first image pickup area through addition of  $m$  pixels or without addition to the horizontal output line (12; Kinugasa reads out signals in a zoom area one row at a time; see col. 6, line 39 to col. 7, line 27).

Kinugasa does not expressly disclose an exposure control circuit which effects exposures control corresponding to each of the first and second read-out modes.

Yokouchi discloses, in figure 1, an image pickup device operable in two modes- an all-pixel read mode and a thinning read mode. Yokouchi additionally reveals an auto exposure circuit for exposure control. The examiner notes that Yokouchi's read modes both effect reading from the whole of a pixel area; however, because the number of pixels that are read out correspond to the selected read-out mode, Yokouchi could be interpreted to read on Applicant's claim language. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kinugasa's teachings since Yokouchi teaches exposure control is performed on all pixels that are read out for a given mode.

Regarding claim 10, Kinugasa discloses an image pickup device operable in a normal operation mode where adjacent pixel rows are added and output via a VCCD to a HCCD and a zooming-in mode where pixel rows are singly output. Kinugasa does not expressly disclose digitizing the output of either of the two modes. Yokouchi discloses, in figure 1, an image pickup device operable in two modes- an all-pixel read mode and a thinning read mode. Yokouchi reveals that it is well known in the art to digitize the output of signals in either mode. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kinugasa's teachings by including an ADC for purposes of post processing or display.

Kinugasa does not expressly disclose an exposure control circuit which effects exposures control corresponding to each of the first and second read-out modes. Yokouchi discloses, in figure 1, an image pickup device operable in two modes- an all-pixel read mode and a thinning read mode. Yokouchi additionally reveals an auto



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exposure circuit for exposure control. The examiner notes that Yokouchi's read modes both effect reading from the whole of a pixel area; however, because the number of pixels that are read out correspond to the selected read-out mode, Yokouchi could be interpreted to read on Applicant's claim language. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kinugasa's teachings since Yokouchi teaches exposure control is performed on all pixels that are read out for a given mode.

***Allowable Subject Matter***

Claims 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 12 and 15, the prior art does not teach or fairly suggest an image pickup apparatus comprising an image pickup area, a read circuit having a first and second read-out mode and an exposure control circuit, wherein

the exposure control circuit comprises an amplifier circuit which is arranged to control an amplification factor of the signals read out from the first and second image pickup areas respectively, in accordance with the first and second read-out modes.

Regarding claim 13, the prior art does not teach or fairly suggest an image pickup apparatus comprising an image pickup area, a driver circuit to effect a first read-out mode and a second read-out mode and an exposure control circuit, wherein

the exposure control circuit comprises an amplifier circuit which is arranged to control an amplification factor of the signals read out from the first and second image pickup areas respectively, in accordance with the first and second read-out modes.

Regarding claim 14, the prior art does not teach or fairly suggest an image pickup apparatus comprising an image pickup area, an analog/digital converter circuit, a processing circuit and an exposure control circuit, wherein

the exposure control circuit comprises an amplifier circuit which is arranged to control an amplification factor of the signals read out from the first and second image pickup areas respectively, in accordance with the first and second read-out modes.

### ***Conclusion***

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


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2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RNT

  
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